

"Approved
LCSIC
3-15-05

Stall for Next to Last PipeStage (NLP)

Stall (NLP) = Valid Instruction in Pipe (NLP) AND (Threadid (NLP) = Threadid of Stall)

Stall for any other PipeStageX

Stall(X) = Valid Instruction in Pipe(X) AND Valid Instruction in Pipe(X+1) AND Stall (NLP)

Powerdown for any PipeStage X

Powerdown(X) = NOT Valid Instruction in Pipe(X-1)

Clock Enable for any PipeStage X

Clock(X) = NOT Stall(X) AND NOT Powerdown(X)

~~Clear~~
Clock for any PipeStage X

Clear(X) = Clock(X) AND [(ClearThread(Id0) AND (Threadid(X-1) = Id0)) OR (ClearThread(Id1) AND (Threadid(X-1) = Id1))]
OR
NOT Clock(X) AND [(ClearThread(Id0) AND (Threadid(X) = Id0)) OR (ClearThread(Id1) AND (Threadid(X) = Id1))]

ClearThread (Id0) = There was a Clear on Thread Identification 0

ClearThread (Id1) = There was a Clear on Thread Identification 1

Pipe(X) = Any pipestage in the decode

Pipe(X-1) = Pipestage before Pipe(X)

Pipe(X+1) = Pipestage after Pipe(X)

FIG. 7